

OmniWall® DISPLAY PROCESSOR FIRMWARE UPDATE INSTRUCTIONS FIRMWARE VERSION 4.4.1.0

Due to the complex nature of this update, please familiarize yourself with these instructions and then contact RGB Spectrum Technical Support (tech@rgb.com; +1-510-814-7000, option 1) before performing the update.

To install any version prior to 4.4.1.0, you must contact RGB Spectrum for assistance.

IMPORTANT

All interlaced inputs to the *OmniWall* should be disconnected or disabled before performing an update. If disconnection is not feasible, all upstream and downstream devices must be fully powered-down.

Overview

Performing the firmware update via the serial port is preferable to using the Ethernet port, because the *OmniWall* will continue to communicate its status even through a system reset. (This, however, assumes that the serial port baud rate is 9600 bps. Refer to [Step 1, Set Serial Port Baud Rate to 9600 bps \(if using Serial Port Connection\)](#) for more information.)

Although Telnet may be used to enter commands, Ethernet connections are lost when the *OmniWall* resets and require a new log-in after each occurrence, and therefore cannot provide continuous status updates, including when a reset cycle has completed.

The serial port method tells you when an update command or system reset has completed by the return of the prompt (>) on the screen of the control PC. With Telnet, once the reset starts, the Telnet connection is lost. To prevent a premature re-login to the *OmniWall* which could interfere with the update process, the recommended wait time is approximately 30 minutes for the update command.

Determining the Current Firmware Version

Push the **SYS** button and then rotate the control knob until the currently-installed firmware version appears on the front-panel display.



Updating to Version 4.4.1.0

To perform the firmware update, follow these steps:

1. [Set Serial Port Baud Rate to 9600 bps \(if using Serial Port Connection\)](#)
2. [Export Settings](#)
3. [Download Exported Settings from the OmniWall to a PC](#)
4. [Upload Firmware to the OmniWall](#)
5. [Install Firmware](#)
6. [Update the Boot Code of the I/O Cards](#)
7. [Update Firmware Again](#)
8. [Upload Settings From PC and Import Settings Back to OmniWall](#)
9. [Reset the OmniWall](#)

1. Set Serial Port Baud Rate to 9600 bps (if using Serial Port Connection)

During the firmware update, all *OmniWall* settings (except for IP network settings) reset to factory-default values. As a result, the serial port baud rate resets to 9600 bps.

If you plan to use the *OmniWall* serial port to perform the firmware update and monitor its progress, and are currently using a baud rate other than the default setting, change the baud rate to 9600 bps both at the switcher and in your terminal emulation program settings. This will ensure uninterrupted communication between the *OmniWall* and your terminal emulation program throughout the update process.

To change the *OmniWall* baud rate from the command line, use the command `baud 9600`. To change it from the Web Control Panel (WCP), click the System Info tab and choose **9600** from the **Baud Rate** drop-down list. Then, use your terminal emulation program to establish a serial connection with the *OmniWall* at 9600 bps.

2. Export Settings

It is highly recommended that all system settings be saved and downloaded to a PC prior to beginning the update procedure.

Use a serial or Telnet connection to export settings from the *OmniWall* by executing the following command:

```
exportsettings all [file_name.txt]
```

This creates a file in the FTP folder of the *OmniWall* containing a copy of the existing settings. If you do not specify a file name, it will be named **export.txt**.

Tip

To export all settings to a file called **export.txt**, use the command by itself with no arguments. That is, these three commands are equivalent:

```
exportsettings
exportsettings all
exportsettings all export.txt
```

Transferring Files

Files may be downloaded from and uploaded to the *OmniWall* using File Transfer Protocol (FTP) via connection through the Ethernet port. Files that may be uploaded to the *OmniWall* include previously-saved system settings, new firmware, presets, and EDID information.

IMPORTANT

The FTP client must be in binary mode to upload firmware. The mode does not have to be set when transferring files using Windows Explorer.

In the steps that follow, an FTP session is illustrated using Windows Explorer (start **My Computer**). While the procedure is similar with other operating systems or FTP client applications, the appearance of the individual windows may vary.

3. Download Exported Settings from the *OmniWall* to a PC

- a** Connect a PC to the Ethernet port of the *OmniWall* to transfer files.
- b** Open Windows Explorer.
- c** In the address bar, enter the FTP command:

```
ftp://rgb:spectrum@nnn.nnn.nnn.nnn
```

where **nnn.nnn.nnn.nnn** is the IP address of the *OmniWall*; **rgb:spectrum** is the user name and password. The examples that follow use the address 192.168.1.238.

The *OmniWall* FTP directory appears in the Explorer window as shown in [Figure 1](#).

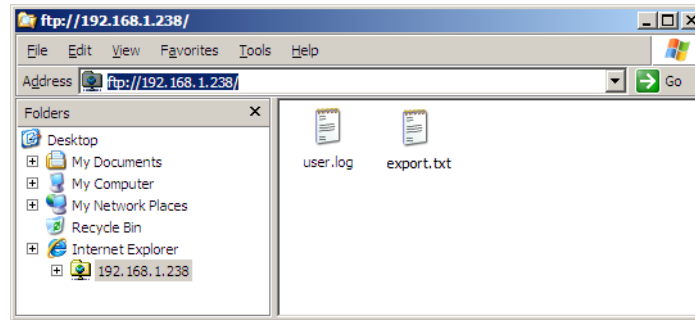


Figure 1 OmniWall FTP Directory

- d Drag the exported settings file created in [Step 2](#) from the *OmniWall* FTP folder to the desired location on the connected PC. Files that may be downloaded from the *OmniWall* include exported system settings, EDID information, and presets.

4. Upload Firmware to the *OmniWall*

IMPORTANT

Do not interrupt power to the unit during the firmware update.

Delete any exported or saved files in the *OmniWall* FTP buffer before uploading any firmware files. System files **user.log** and **.profiles**, if present, do not need to be deleted.

The FTP client must be in binary mode to upload firmware.

- a Open another Explorer window and navigate to the location on the computer that contains the firmware file, **FWMO_4.4.1.0.tgz**.

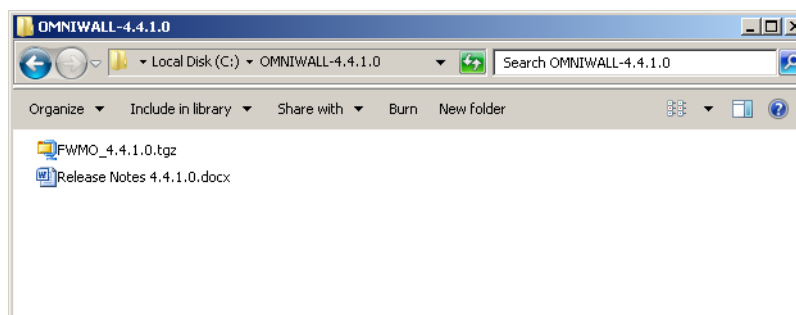


Figure 2 Locate File to Upload

- b** Select the firmware and drag it to the *OmniWall* FTP directory. Copy progress is displayed.

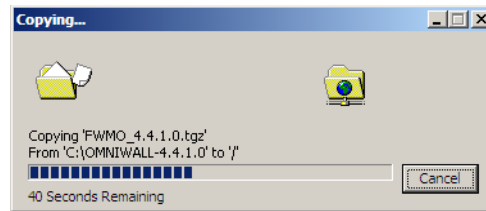


Figure 3 Copying Firmware to the OmniWall

- c** When copying is complete, the firmware appears in the FTP directory along with other system files.

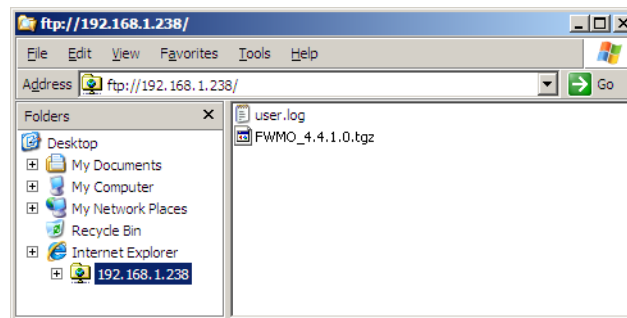


Figure 4 Firmware Uploaded

5. Install Firmware

- a** From the serial port command line, execute the `UFW` command.
- b** For serial port control, press Enter to display a command prompt (`>`) when this message appears:

CARD CONFIG REPLIES RETURNED FROM ALL I/O CARDS(1)

For Telnet operation, allow approximately 30 minutes to for the system to complete the update and reboot. Then, press Enter to display a command prompt (`>`).

- c** Issue the **SYStemINFO** (`SYSINFO`) command to verify that the correct firmware version is displayed. [Figure 5](#) shows a **SYStemINFO** report example.

```

Model:                OmniWall 16
Manufacture date:     12/06/2013
Serial number:        1002666
Firmware version:     4.4.1.0
SH4 firmware version: 4.4.1.0
Firmware build date:  Jul 17 2014 14:00:42
Hardware revision:    1.0
CPLD version:         1.17
WCP Applet Version:   4.3.1
Reboot count:         157
System up time:       1d 4h 48m 0s
Total system up time: 219d 19h 53m 24s
Host name:            OmniWall
IP address:           10.0.0.232
Subnet mask:          255.255.255.0
Gateway IP address:   10.0.0.1
MAC address:          1a:2b:3c:4d:5e:6f
Options               Dual-Link Wall_Cmds
System logging level:  Warning
System upgrade state:  no ufw/ubt/retry in progress
Backplane FPGA version: 1.26
Input
Card  FW Ver  HW Ver  Card Type  FPGA Ver  Boot
----  -
1    10.006   3.0    Dual Single Link DVI  1.1.2     1.13
2    10.006   3.0    Dual Single Link DVI/RGB 0.2.20    1.13
3    10.006   3.0    Single Dual Link DVI/RGB 2.1.16    1.13
4    10.007   3.0    HDBT Input  11.1.3    4.13
5    10.006   1.0    Fiber IN  8.1.6     4.13
6    10.006   2.0    HD SDI  6.1.7     4.13
7    10.006   3.0    Dual Single Link DVI/RGB 0.2.20    1.13
8    10.006   3.0    Single Dual Link DVI/RGB 2.1.16    1.13
Output
Card  FW Ver  HW Ver  Card Type  FPGA Ver  Boot
----  -
1    10.007   2.0    HDMI Audio Output  10.0.13   2.13
2    10.006   2.1    Dual Single Link DVI 0.2.20    2.13
3    10.006   4.0    Single Dual Link HDMI 3.3.19    2.13
4    10.006   2.0    HDBT Output  11.1.3    2.13
5    10.013   3.0    Dual Single Link DVI Scaler 7.2.42-2.6.156A 3.13
6    10.013   3.0    Dual Single Link DVI Scaler 7.2.42-2.6.156A 3.13
7    10.013   3.0    Dual Single Link DVI Scaler 7.2.42-2.6.156A 3.13
8    10.013   3.0    Dual Single Link DVI Scaler 7.2.42-2.6.156A 3.13

```

Figure 5 SYSINFO Report Example

- d** Verify that the FPGA firmware versions for all cards match those in the most recent firmware release notes.

6. Update the Boot Code of the I/O Cards

IMPORTANT

Before updating boot code, any device that provides pin power to the *OmniWall* should be disabled. To do this, disconnect or power down the device.

Note

If **all** input and output cards already have boot code version x.13, skip to [Step 8, Upload Settings From PC and Import Settings Back to OmniWall](#).

After system reboots, execute the command:

```
UBT ALL ALL
```

This command updates the boot code on all input and output cards. When this process completes, the following message appears on the console:

```
READY TO RELOAD STANDARD I/O CARDS FIRMWARE
```

When it does, press Enter to display a command prompt (>).

7. Update Firmware Again

- a Repeat Steps [5a](#), [5b](#), and [5c](#) above.
- b Verify that the correct firmware version is displayed and that all input and output cards have boot code version x.13.

8. Upload Settings From PC and Import Settings Back to OmniWall

- a Use the procedure in [Upload Firmware to the OmniWall](#) to initiate a browser-based FTP session.
- b Upload the system settings file that you created in [Step 2](#) and downloaded in [Step 3](#) to the *OmniWall*.
- c Using a serial or Telnet connection, import the system settings file by executing the command:

```
importsettings [file_name].txt
```
- d The old settings are now available on the *OmniWall*.

9. Reset the OmniWall

Enter the `SYSRST` command to reboot the *OmniWall*.